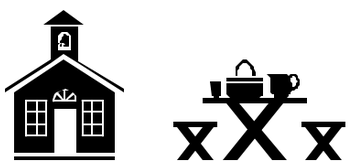
MICHIGAN'S SAFE DRINKING WATER ACT

In 1974, out of concern for the quality of the water we drink, congress passed the Safe Drinking Water Act. This Act gave the U.S. Environmental Protection Agency (EPA) responsibility for establishing and enforcing drinking water quality standards nationwide. The Michigan Safe Drinking Water Act (Act 399) was enacted in 1976 and enables the Michigan Department of Environmental Quality (MDEQ) to maintain primacy (state authority) over the drinking water program in our state. Local health departments are under contract with the MDEQ to conduct periodic inspections and assist noncommunity water supply owners in meeting drinking water requirements.

WHAT IS A NONCOMMUNITY WATER SUPPLY?

Schools, restaurants, churches, campgrounds, motels, highway rest stops, and any other facilities that have a water well that serves 25 or more persons at least 60 days out of the year or have 15 or more service connections meet the definition of a noncommunity water supply. In Michigan, they are also referred to as Type II water supplies.



WHY REGULATE NONCOMMUNITY WATER SUPPLIES?

Over 1.5 million people a day use noncommunity water supplies in Michigan. They have an expectation that the water available to them is safe and free of disease causing agents. Water borne disease outbreaks do occur every year in the United States. Water supply owners, the public, and regulatory agencies, all play an important role in maintaining safe drinking water.

WHAT MAKES A WATER SUPPLY SAFE?

Noncommunity water supply owners are required to sample the water periodically. However, the best assurance of a safe water supply is construction, location, and operational practices that prevent contamination from entering the drinking water system in the first place. Therefore, emphasis is placed on preventative practices and sampling is used to spot check the integrity of the systems at any given time.

WHAT IS A SANITARY SURVEY & SOURCE WATER ASSESSMENT?

Sanitary Survey

At least once every five years, a sanitary survey-source water assessment is conducted for each noncommunity water supply by the state or local health department. A sanitary survey is a comprehensive inspection of the well, pumping equipment, distribution, and any treatment equipment to assess the potential for contamination to enter the water system. A written report is provided and if deficiencies are found, a compliance schedule is worked out with the owner to correct the problems. Sampling requirements may be increased in the interim.

Source Water Assessment

In conjunction with the sanitary survey, information is collected to determine the relative potential for contamination of the source water. This process is called a source water assessment. The following is a general list of the items evaluated:

Source Water Assessment (con't)

-**Geologic Sensitivity**; the degree of natural protection afforded by the overlying soils or rock formations and depth to water table.

-**Physical Properties of the Well**; the well depth, age, depth of casing, grouting method, and other key factors that contribute to the integrity of the water system.

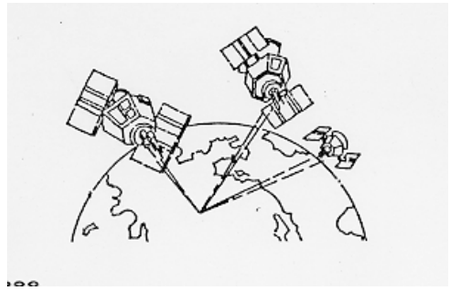
-**Water Quality History**; The bacteriological, chemical and isotope data of the well water as it indicates any influence from surface or near surface activities.

-**Contaminant Sources**; the isolation of the water supply well from potential sources of contamination such as sewers, septic systems, fuel/chemical storage, lagoon, landfills, and others.

Each of these are assigned points for particular situations, which are used to establish the "relative risk" to the water supply. The initial assessments will provide a tool for determining sources that may need additional assessment and enhanced ground water protection measures. The Safe Drinking Water Act required that these water supply assessments be completed by May of 2003.

Global Positioning System

The well is also mapped in a statewide ground water database through the use of geographical positioning system (GPS) units. Developed by the U.S. Department of Defense, the GPS system operates by determining the location of a certain point, such as a well, by using four of 24 satellites circling the Earth.

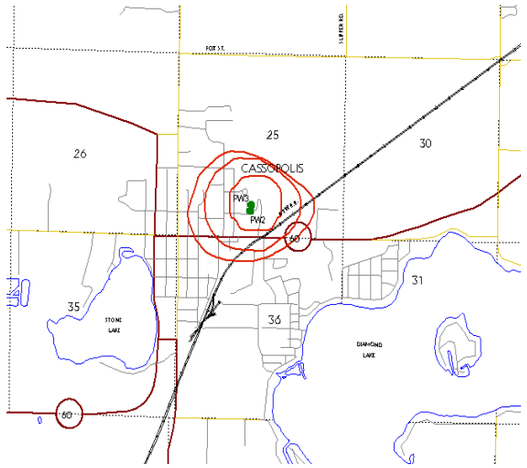


Global Positioning System (con't)

Each of these satellites broadcasts signals with precise time messages. A stationary ground unit receives these signals, which is then used by a receiver to calculate the distance to the satellites. The receiver, which is usually a hand-held unit being used at the well head, can determine its exact latitude, longitude and altitude within a few feet by measuring the difference between the time the signal is sent by the four different satellites and the time it is received.

HOW WILL THIS INFORMATION BE USED?

By compiling all of the survey, assessment scores, well log, and GPS information, the state can develop maps showing areas of where water supplies may be at risk. Future decisions related to increasing or reducing sampling frequencies, treatment, or operational changes for water supplies can be made based on a complete, reliable database. It may also be used by communities, supply owners and developers to implement well head protection programs in their area.



SELF INSPECTION - WHAT TO LOOK FOR?
As an owner, employee, or customer, you may observe situations that can lead to contamination of the water supply. Recognizing common problems and bringing them to the attention of the individuals responsible for the water system can prevent future contamination. The following are general areas of concern:

1. **TOP OF THE WELL** - should be 12 inches above grade and not subject to flooding or ponding of surface water. Damage from snow plows, lawn mowers or vehicular traffic may open the well to contamination.

2. **WELL CAP** – should be tight fitting, sealed to prevent entrance of water, debris, bugs and rodents, and have a screen on the vent.

3. **CONTAMINATION SOURCES** – Major sources of contamination, such as underground storage tanks, landfills, sewage lagoons or other areas of chemical storage or disposal should be at least 800 feet from a noncommunity water supply. Also, these supplies should be at least 75 feet from other sources of contamination, such as septic tanks, drainfields, or surface water.

4. **PUMP AND STORAGE** – The pumping and storage equipment for the well and distribution system must be of approved design and be located in approved areas. Pumps and storage tanks located below grade can be subject to flooding and unsanitary conditions.

5. **DISTRIBUTION SYSTEM AND CROSS – CONNECTIONS** – The distribution system must be constructed of approved piping materials and installed properly. The water supply must also be protected against contamination by the proper installation of approved backflow prevention devices on equipment such as boilers and sprinkler systems, machines using chemicals and hose connection.

6. **TREATMENT INFORMATION** - If there is a water treatment device, such as a softener, chlorinator, filter, etc., it must be operated properly, in accordance with manufacturer's specifications and state regulations. If a disinfection system or other public health treatment is provided, the treatment operator must be properly certified.

7. **RECORD KEEPING -** A well record or log is required to be completed and provided to the owner by the drilling contractor for all wells drilled since 1965. This record indicates the depth of the well, static water level, and other important information. The well log, service records, water sample results, sanitary survey documents, and other related information is required to be kept on file, and available for inspection.

8. **UNPLUGGED ABANDONED WELLS** - Any well that has its use permanently discontinued, is in such poor repair it cannot be used or is a threat to the groundwater resource is considered to be abandoned. If there is an abandoned well on the property, the law requires that it be plugged in accordance with State regulations. If you have such a well on your property, you should contact a registered well drilling contractor to find out what must be done to properly abandon it.

HOW DO I FIND OUT MORE?
The environmental health staff at the county/district health departments provides direct services to noncommunity water supply owners in their jurisdiction. Questions regarding sampling requirements or sanitary surveys should be directed to your local health department. At the MDEQ, Noncommunity program staff may be reached at the Water Bureau, in Lansing, at 517-241-1370. Upper Peninsula inquiries may be directed to 906-346-8530.

The Noncommunity Water Supply website address is:
http://www.michigan.gov/deq/0,1607,7-135-3313_3675_3692---,00.html

The WSSN assigned to your facility is:_____

Water Bureau
Drinking Water & Environmental Health Section
Noncommunity Unit
Phone: 517-241-1370 Fax: 517-241-1328

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NONCOMMUNITY WATER SUPPLIES

SANITARY SURVEYS AND SOURCE WATER ASSESSMENTS

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER BUREAU

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